Attachment D
Types of WQ Monitoring*

Assessment monitoring is used to characterize existing water quality conditions, usually as a snapshot on a large spatial scale. Data collected may be used to direct further, more in-depth monitoring activities. The SWAMP program conducts this type of monitoring. NCWAP and the 303(d) listing process often utilize assessment monitoring data. Assessment monitoring is sometimes referred to as "baseline" or "inventory monitoring".

Trend monitoring is used is used to characterize water quality conditions over time, usually on a large spatial scale. The trajectory of a particular parameter over time provides information about the effects that cumulative impacts may be having on that parameter.

Effectiveness monitoring is used to determine whether particular land management prescriptions (e.g., erosion control measures, restrictions on activities in riparian zones, etc.) are effective at achieving desired results. Effectiveness monitoring is most appropriately conducted using a robust study design at a prescription scale.

Compliance monitoring is used to determine whether discharges resulting from land use activities are in compliance with water quality standards. Compliance monitoring may be conducted at various spatial scales, but is most applicable at the project scale or smaller. Many equate this type of monitoring with effectiveness monitoring. In a way, compliance monitoring may be considered a special case of effectiveness monitoring, such that it may be used to determine whether particular land management practices are effective at meeting water quality standards.

Implementation monitoring is used to determine whether activities were carried out as planned. Typically, this type of monitoring relates to the implementation of a set of rules or land use guidelines and prescriptions, is qualitative, and may be conducted at any spatial scale. Many call this type of monitoring "compliance monitoring" because it is used to determine if a landowner is in "compliance" with the Forest Practice Rules (for example). However, "implementation" is a broader term that can be applied to not just the Forest Practice Rules, but an erosion control plan, or a TMDL implementation plan, etc.

Forensic monitoring is used to identify pollutant sources for purposes of timely remedial action in the field. It is typically conducted on small spatial scales, as close to suspected pollutant sources as possible. Forensic monitoring is often designed such that certain instream conditions trigger field inspections. However, triggers for field inspections can also be event-driven (i.e., certain rainfall events).

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